ENVIRONMENTAL CHEMISTS

Date of Report: 01/12/99
Date Received: 12/31/98

Project: Metro Self Monitor, PO# M78004

Date Samples Extracted: 01/08/99 Date Extracts Analyzed: 01/11/99

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	1	<u>Chromium</u>	Copper	Nickel	Zinc
M78004		0.31	0.28	0.31	< 0.05
Method Blank		< 0.05	< 0.05	< 0.05	< 0.05

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Date of Report: 01/12/99 Date Received: 12/31/98

Project: Metro Self Monitor, PO# M78004

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 812122-01 (Duplicate)

				Relative		
	Reporting	Sample	Duplicate	Percent	Acceptance	
Analyte	Units	Result	Result	Difference	Criteria	
Chromium	mg/L (ppm)	0.42	0.46	9	0-20	
Copper	mg/L (ppm)	0.24	0.28	15	0-20	
Nickel	mg/L (ppm)	0.31	0.31	0	0-20	
Zinc	mg/L (ppm)	< 0.05	< 0.05	nm	0-20	
	Chromium Copper Nickel	Analyte Units Chromium mg/L (ppm) Copper mg/L (ppm) Nickel mg/L (ppm)	Analyte Units Result Chromium mg/L (ppm) 0.42 Copper mg/L (ppm) 0.24 Nickel mg/L (ppm) 0.31	Analyte Units Result Result Chromium mg/L (ppm) 0.42 0.46 Copper mg/L (ppm) 0.24 0.28 Nickel mg/L (ppm) 0.31 0.31	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$

Laboratory Code: 812122-01 (Matrix Spike)

	Reporting	Spike	Sample	% Recove	ry % Recove	ery Acceptance	
Analyte	Units	Level	Result	MS	MSD	Criteria	RPD
Chromium	mg/L (ppm)	5	0.42	104	101	80-120	3
Copper	mg/L (ppm)	5	0.24	101	95	80-120	6
Nickel	mg/L (ppm)	10	0.31	104	102	80-120	2
Zinc	mg/L (ppm)	5	< 0.05	109	105	80-120	4

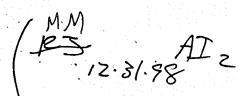
Laboratory Code: Laboratory Control Sample

	Reporting	Spike	% Recove	ery % Recove	ery Acceptance	• *******	
Analyte	Units	Level	LCS	LCSD	Criteria	RPI)
Chromium	mg/L (ppm)	5	103	102	80-120	1	
Copper	mg/L (ppm)	5	102	101	80-120	1	
Nickel	mg/L (ppm)	10	102	103	80-120	1	
Zinc	mg/L (ppm)	5	103	103	80-120	0	

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282

812156



SAMPLE CHAIN OF CUSTODY

Send Report To: Company Address 628	skail Copp	on Wox	lcs	Conta	act Ge	eaco Thor	npson
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need Results Thanks	by 1-13-99					E DISPOSAL INFO Dispose after 30 d Return Samples Call for Instruction	ays
Sample #	Date/Time Sampled	Type of Sample	# of Jars	Lab Sample		Analyse Request	es
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FORMS/COC

12/22/98

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

January 12, 1999

DUPLICATE COPY

INVOICE #99ACU0112-1

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M78004: Results of testing requested by Gerry Thompson for material submitted on December 31, 1998.

1 water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ \$80 per sample \$80.00

Amount Due \$80.00

FEDERAL TAX ID (b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

January 12, 1999

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on December 31, 1998 from your Metro Self Monitor, PO# M78004 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Manuel Marti Project Manager

Enclosures ACU0112R.DOC